

## 2017 Oocyte Recovery and ICSI

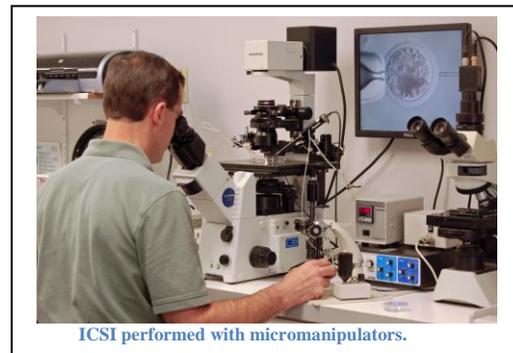
Equine Medical Services is one of the world's leading producers of in vitro produced embryos. While standard IVF techniques are ineffective with horses, ICSI (Intracytoplasmic Sperm Injection), where an individual sperm cell is microscopically injected into each egg, can be quite successful. This technique is useful for mares that cannot make embryos on their own or for situations where supplies of semen are limited. For this procedure an oocyte (egg) is collected from the donor mare's follicle prior to ovulation and cultured until it is mature. Oocytes can also be aspirated from the small subordinate follicles that may also be present on the ovaries. The oocytes are fertilized in the laboratory by ICSI. The oocyte is then cultured and allowed to divide to become an embryo; each cellular division cycle takes about 24 hours. Once the embryo becomes a blastocyst (7-9 days), it is transferred to the uterus of a recipient mare. Since only a single sperm cell is selected and injected, ICSI can utilize very small quantities of frozen semen.



ICSI: Sperm cell (in pipette on right) being injected into an oocyte.

### ICSI Program

The ICSI Program is set up in a similar manner to the Embryo Transfer Program. There is an initial entry fee into the program of \$1,775. This is to pay for normal breeding management of the donor mare and maintain and monitor suitable recipient mares, and is a one-time fee for the year, regardless of the number of pregnancies achieved. Each oocyte collection session is \$300. The fee for oocyte maturation and ICSI is \$350. Once a recipient mare reaches 30 days of gestation with a viable pregnancy there is a lease fee of \$3,875 or \$4,475 for draft horse embryos.

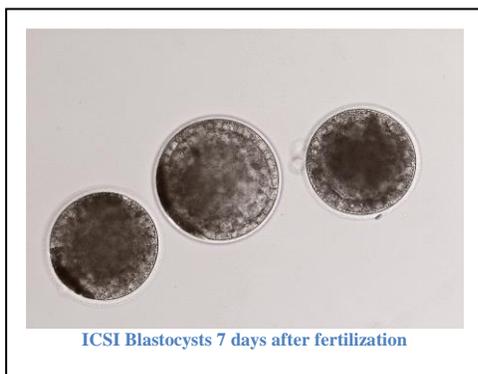


ICSI performed with micromanipulators.

### Transported Oocyte/ICSI Program

Two programs are available for transported oocytes, allowing a referring veterinarian to collect oocytes and ship them to Equine Medical Services. The Transported Oocyte for ICSI program provides for EMS shipping embryos back to the referring veterinarian or another center for transfer. This program has no initial entry fee, oocyte maturation is \$200, ICSI is \$350, and there is a \$1,000 fee for each blastocyst produced. The Transported Oocyte for ICSI and Embryo Transfer program provides for transfer of embryos into EMS recipient mares. There is a \$1,000 initial nomination fee, the oocyte maturation and ICSI fees are \$200 and \$350 respectively, and there is no blastocyst fee. Once a recipient mare reaches 30 days of gestation with a viable pregnancy there is a lease fee of \$3,875 or \$4,475 for draft embryos.

### What to Expect



ICSI Blastocysts 7 days after fertilization

One should expect recovery of an oocyte from a dominant follicle on approximately 75% of the attempts. Immature oocytes can often be collected from smaller follicles at the same time. Oocytes (eggs) fertilized through ICSI will divide and grow approximately 70-80% of the time, of those 20-30% will grow in culture to the blastocyst stage for non-surgical transfer. Oocyte quality and vigor decline with the donor mare's age so that older donors tend to have lower success rates than young mares. Oocyte numbers can be another limiting factor; some mares have many small follicles each cycle facilitating the recovery of multiple oocytes, while other mares have only 1 or 2 follicles present each cycle. The average donor mare will require 3 cycles to establish a pregnancy, but that is just an average; some mares establish multiple pregnancies on their first cycle while other mares with decreased oocyte viability can prove to be more difficult.

2017  
Oocyte ICSI Contract

This Contract made on \_\_\_\_\_, 20\_\_\_\_, by and between **Equine Medical Services, Inc.**, a Missouri Corporation, hereinafter called “**EMS**”, and \_\_\_\_\_, hereinafter called “**Owner**”, both of whom are hereinafter called the “**Parties**”.

**Recitals:**

**EMS** is in the business of equine oocyte recovery and embryo production via ICSI.

**Owner** desires to enter a contract with EMS for such services.

**Therefore, the Parties agree as follows:**

1. Owner shall deliver its mare, the “Donor Mare”, named \_\_\_\_\_, to EMS in Columbia, Missouri. Upon delivery, EMS shall initiate the process of oocyte transfer. EMS shall attempt to recover oocytes from the Donor Mare, evaluate the oocytes, and if apparently healthy, fertilize the oocytes via ICSI, and transfer embryos produced into the uterus of “Recipient Mares” prepared and owned by EMS.
2. Upon the signing of this Contract, Owner shall pay to EMS a \$1,775.00 non-refundable (under any circumstances) annual enrollment fee. Said fee shall be considered payment for **only** the following services: palpation, ultrasound examination, transfer of embryos produced, and general reproductive management, between February 1, and December 1, 2017. Owner will be charged standard veterinary fees for uterine treatment and GnRH agonist injections if they are deemed necessary based on the separate judgment of EMS. In addition owner agrees to pay veterinary fees deemed necessary for proper breeding and health management. This nomination fee is not transferable to another “Donor Mare” nor is the nomination fee for this “Donor Mare” transferable to another owner.
3. Owner agrees to pay EMS \$300 for each oocyte collection procedure and \$350 for each ICSI (Intracytoplasmic Sperm Injection) session.
4. Upon each Recipient Mare reaching 30 days of gestation with a viable pregnancy, Owner shall pay to EMS \$3,875.\* EMS shall start charging boarding fees for the Recipient Mare after she reaches 30 days gestation at the rate of \$12.75 per day. The Owner may, and is encouraged to, transport the Recipient Mare any time after she reaches 30 days of gestation. Without prior arrangements, board for pregnant recipients will increase to \$14.75 per day at 60 days of gestation and \$20.00 per day at 90 days of gestation.  
\*The recipient lease fee for draft horse embryos is \$4,475.
5. Owner shall return each Recipient Mare to EMS in good health within 6 months following foaling. If Owner is unable to so-return the Recipient Mare due to the death of the mare, Owner agrees to pay EMS \$1,350.00 (\$2,500 if the Recipient Mare is a draft or draft cross mare), and to supply EMS with a letter from the examining veterinarian stating findings at the time of the death of the Recipient Mare. If Owner fails to return the Recipient Mare for any other reason Owner agrees to pay EMS \$2,500 (\$4,500 if the Recipient Mare is a draft or draft cross mare).
6. It is expected that each Recipient Mare will deliver a live foal (defined for this purpose as able to stand and nurse within 24 hours after birth). If, after 30 days gestation, a Recipient Mare loses the pregnancy, the Owner will receive a \$2,000 credit towards future services. The Recipient Mare must be returned and a letter from the examining veterinarian stating findings at the time of loss must be presented for the credit to be issued. No credit will be issued if the loss is due to an inherited genetic defect such as lethal white syndrome.

7. If EMS is in possession of Donor Mare, Owner shall pay as billed by EMS as follows:
  - a. for pasture boarding, \$18 per day;
  - b. for stall boarding, \$18 per day;
  - c. for mare and foal boarding, \$19.75 per day.

All boarding arrangements are on a first-come, first-serve basis. Paddock boarding is only available from March 15 through September 15. If Owner has not transported Donor Mare from EMS within 30 days of cessation of reproductive procedures, the above board rates will be doubled from that time forward.

8. EMS recommends to Owner that Owner insure Donor Mare, Recipient Mare and the embryo against all losses and risks of every kind, nature and description. Owner shall indemnify and hold EMS harmless with respect to said losses and risks. The parties agree and understand that during the period that EMS is in possession of the Donor Mare, good practice and health considerations may require medical or farrier treatment for unforeseen or emergency conditions. Therefore, during the term of this agreement, owner hereby grants to EMS the right and authority, based upon its separate judgment, to have the Donor Mare treated or shod at any time. Owner shall pay/reimburse EMS for the cost thereof. Owner also agrees to be financially responsible for veterinary expenses of the Recipient Mare after 30 days of gestation.

9. All notices required by this Contract shall be given as follows: if to EMS, then, Equine Medical Services, Inc., 5851 Deer Park Road, Columbia, MO 65201-9751; if to Owner, then the address shown at Owner's signature.

10. Owner understands and agrees that EMS is not responsible for the expense of stallion fees, transporting semen, or semen containers. Further, Owner understands and agrees that EMS is not responsible for registration or blood-typing of the resultant foal.

11. Owner understands and agrees that many factors impact upon successful oocyte recovery, embryo production via ICSI, and pregnancy following embryo transfer, and that although EMS shall use its best efforts to perform the services required by this Contract, EMS does not guarantee success of the procedures. If EMS is unable to either recover an oocyte and/or if the procedures do not result in a pregnancy, Owner's damages shall be limited to EMS's continuing obligation to complete the same subject to the following limitations (all at the Owner's sole expense and risk):

If EMS is unable to produce a pregnancy from the Donor Mare, EMS or Owner shall have the right to declare this Contract terminated. In such event, Owner shall (a) pay to EMS all sums due under this Contract and (b) arrange for the transportation of Donor Mare (at Owner's sole expense and risk) to Owner. As a further limitation, if any recovery of an oocyte or pregnancy production be unsuccessful, EMS's continuing obligation to complete the same shall terminate at the end of the calendar year. Thereafter this Contract shall be deemed terminated and the Parties shall have no further obligations to one another.

12. EMS reserves the right to refuse or suspend service when the Owner's account is past due.

13. It is understood by the Parties that if the owner desires that an embryo is frozen Owner will pay EMS \$250.00 for that service as well as a monthly storage fee. It is further understood that when the embryo is transferred to a Recipient Mare in the future, it will be to a Recipient Mare owned by EMS, and Owner agrees to pay the Recipient Lease fee currently in force at EMS for that year.

14. It is specifically understood and agreed between the Parties that if Owner desires embryo biopsy and Pre-Implantation Genetic Diagnosis (PGD), Owner will pay to EMS \$500.00 for that service. It is further understood by the Parties that the success of embryo biopsy and PGD relies on many factors and while EMS will use its best efforts toward the success of the procedures, EMS does not guarantee results of those procedures. The Parties agree that if a pregnancy is to be terminated before 30 days of gestation due to the results of PGD, Owner will pay EMS \$500.00 for the use of the recipient mare during that cycle.

15. It is understood that if an embryo leaves the program whether shipped to another facility,



**Equine Medical Services, Inc.**

**Broodmare Admission Sheet**

**Owner Information:**

Name \_\_\_\_\_ Email Address \_\_\_\_\_

Address \_\_\_\_\_

Phone Number \_\_\_\_\_ Alternate Phone Number \_\_\_\_\_

**Mare Information**

Registered Name \_\_\_\_\_ Barn Name \_\_\_\_\_

Age \_\_\_\_\_ Color \_\_\_\_\_ Breed \_\_\_\_\_

Special Care (feeds, supplements, medications) \_\_\_\_\_

Hoof Care (if not specified, EMS will schedule farrier visits) \_\_\_\_\_

Dental Care (Do teeth need to be floated? When last checked?) \_\_\_\_\_

Vaccinations and Deworming: If this information is not available, we will perform the necessary vaccinations. The overall health of your mare and the protection of others are of utmost importance.

Enter the dates vaccinations and Coggins were performed in the spaces provided:

\_\_\_\_\_ Negative Coggins \_\_\_\_\_ EWT \_\_\_\_\_ Rhino/Flu  
\_\_\_\_\_ West Nile \_\_\_\_\_ Strangles \_\_\_\_\_ Rabies \_\_\_\_\_ Dewormer

Items Accompanying Mare \_\_\_\_\_

**Breeding Information**

Check all that apply:

\_\_\_ Maiden      \_\_\_ History of normal foaling      \_\_\_ Foal by side

\_\_\_ Cultured, clean      \_\_\_ Cultured, infected

\_\_\_ History of breeding problems. Please explain \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_ **Breed to carry**      \_\_\_ **Embryo Transfer**      \_\_\_ **Oocyte Transfer (ICSI)**

Stallion's Name \_\_\_\_\_ Contact Name \_\_\_\_\_

Phone Numbers and/or email \_\_\_\_\_

\_\_\_ Fresh      \_\_\_ Frozen      Collection Schedule \_\_\_\_\_

Subsequent Stallion(s), if applicable:

Stallion's Name \_\_\_\_\_ Contact Name \_\_\_\_\_

Phone Numbers and/or email \_\_\_\_\_

\_\_\_ Fresh      \_\_\_ Frozen      Collection Schedule \_\_\_\_\_